WHAT IS CLAIMED IS:

1. A method of reducing signal processing delay time in a CDMA cellular communications system, the method comprising:

processing a data frame according to a first process;

simultaneously processing said data frame according to a second process; and

combining selected segments of said data frame processed according to said first process with selected segments of said data frame simultaneously processed according to said second process.

2. The method according to claim 1, further comprising temporarily storing said combined segments of said data frame in a buffer.

3. The method according to claim 1, further comprising de-interleaving and decoding said combined segments of said data frame.

4. The method according to claim 1, wherein said combining step includes selecting only segments that were

processed not substantially later in time than a completion of said first process.

5. The method according to claim 1, wherein said second process uses an interference cancellation algorithm.

6. The method according to claim 1, further comprising estimating a spreading factor to be used with said second process.

7. The method according to claim 6, further comprising detecting a correct spreading factor for said data frame and comparing said estimated spreading factor with said correct spreading factor.

8. The method according to claim 7, wherein said segments that were processed using said estimated spreading factor may be selected only if said estimated spreading factor is substantially the same as said correct spreading factor.

9. A signal receiving apparatus for reducing signal processing delay time in a CDMA cellular communications system, comprising:

a first processor for processing a data frame;

a second processor for simultaneously processing said data frame; and

a selector coupled to said first and second processors, said selector adapted to combine selected segments of said data frame processed by said first processor with selected segments of said data frame simultaneously processed by said second processor.

10. The apparatus according to claim 9, further comprising a buffer for temporarily storing said combined segments of said data frame.

11. The apparatus according to claim 9, further comprising a de-interleaver and a decoder for de-interleaving and decoding, respectively, said combined segments of said data frame.

12. The apparatus according to claim 9, wherein said selector is adapted to select only segments that were

processed not substantially later in time than a completion of said first process.

13. The apparatus according to claim 9, wherein said second processor uses an interference cancellation algorithm.

14. The apparatus according to claim 9, further comprising a spreading factor estimator coupled to said second processor for estimating a spreading factor to be used by said second processor.

15. The apparatus according to claim 14, further comprising a spreading factor detector for detecting a correct spreading factor of said data frame, wherein said selector is further adapted to compare said estimated spreading factor with said correct spreading factor.

16. The apparatus according to claim 15, wherein said segments that were processed using said estimated spreading factor may be selected by said selector only if said estimated spreading factor is substantially the same as said correct spreading factor.